his affection there is a connection between,
hat commonly goes by the name) Hysteria
nd Epilepsy; but I would prefer to limit
he use of the term to cases where there is
first a state resembling Epilepsy in
s spasmodic symptoms, but in which
fterwards, there are conditions which
nore closely simulate some of the grave
erebral lesions. Indeed there is no
name yet coined which expresses the
isease in one word; and, therefore,
or the present, this one will suffice
or our purpose as well as any other
hich expresses a theory, and better
lan one which means nothing, or is
ly formed the better to conceal our
gnorance from the vulgar gaze.
, therefore, do not wish it to be
nderstood that I believe the disease to be
ly an aggravated form of Hysteria, but
at it is Hysteria with a something
per added; and I may at the outset
gin by giving a

Definition.

s follows: — A disease referrible to the
ervous system: characterized, at first,
epileptiform paroxysms, but subsequently
sociated with exaggerated or diminished
functional activity

of some or all parts of that system, which is not ~~of the body, but which are not~~ necessarily permanent or fatal.

As in the examination of the

History

of many other diseases, we find that examples of this affection are by no means rare or even uncommon; but that it has prevailed in different countries from times remote, ~~and~~ Yet in ~~tracing~~ (tracing) ~~their~~ its history it is difficult at times, and occasionally impossible, to discriminate between, and separate, real cases of this nervous disease from spurious ones.

It is interesting to go away back to the time of the earliest philosophers who dabbled in Medicine, and to find for instance that Pythagoras and Plato referred to Hysteria, and believed that all the phenomena were due to the wanderings of the Uterus, (which organ they supposed to be an animal), throughout the various regions of the body. This hypothesis, which reminds us of the theory, at one time propagated, of the arteries being the domicile of spirits of a misty character —— absurd as it seems to us, was unquestionably adopted by Hippocrates. Galen discounted the notion of the Uterus being a wandering animal, but he concurred in

assigning to it the phenomena of Hysteria.
From this period we find various authors
writing upon the subject; but Willis in the
seventeenth century was, in his 'De Morbis
Convulsivis', one of the first in this country
to give a succinct account of the disease,
and its treatment by compression of the
abdomen. Then we have an account of the
Epidemic of St. Medard in France in 1573
at which time the patients were credited
with a knowledge of the unseen, and in
these we find the treatment adopted, was
that of one Mercado, who used frictions
over the abdomen, (and sometimes more
violent measures were resorted to) to reduce
the womb which according to his notion
was displaced.

With the rapid strides with which
Medicine has progressed since this period
we have become — shall I say — more
enlightened — on the subject of Hysteria? —
— is the darkness by present lights only
more obscured? At any rate, much
more is known in regard to the pathology
of these nervous affections in the present
century. The late Professor Laycock —
whose teachings will long remain
indelibly stamped upon the minds of his

pupils, although far from being able to
comprehend, then, the depths to which he
penetrated) — in his 'Nervous diseases of
Women' (1840) was about the first who
attempted to give a rational exposition
of the thousand-and-one phenomena
observed in certain hysteric-like cases;
and since his book appeared, the
subject has been taken up and studied
by most eminent men, at home and
abroad, with the result that we
have made steady advances in the
elucidation of the symptoms of this
mysterious affection.

I will here give a short sketch of the

Symptoms,

of Hystero-Epilepsy as I have seen
them. They are already pretty well known, but it
is requisite that I should summarize them here,
so that I may be able afterwards to refer to them
more directly.

The patient has for some time back declined
in health; not perhaps to any great extent
or, it may be, sufficiently to attract notice —
the only thing noted in many instances being
suppression of the catamenia. Then, at various
periods, there is a sensation of pain in either
groin, commonly the left, which sometimes shoots

nto the chest and then to the head; the globus
ystericus may also be present. There is frequent
eadache, accompanied by lassitude, loss
f appetite, and habitual constipation, and
ne day these merge into the typical
aroxysmal attack. The phenomena of the
aroxysm may with advantage be divided
nto four periods.
° In the first, the patient experiences what are
nown as the Premonitory Symptoms, or Aura
ysterica. There is, usually, the pain arising
n the left ilio-inguinal region of the abdomen,
nd passing up gradually into the Epigastrium,
thence into the throat, and sometimes
escribed by the patient as issuing from the
outh. But the premonitory symptoms do not
nd here. As a rule, cephalic symptoms super-
ene in the form of hissing or strident noises
the left ear, hammering against the
ft temple, and, not infrequently, a dimness
vision in the left eye. In some cases these
ymptoms exist in the right side of the body
nd head.
°. These sensations usher in, with a certainty
- which the patient herself becomes perfectly
ware, and of which we have learned to take
vantage, the second phase of the attack, in
hich the patient may utter a shrill cry and falls

to the ground, as rigid, as pale, and as
wanting in consciousness, as a statue of
marble. This rigidity is most marked on
the side in which arose the Aura — generally
the left. This, the tonic convulsion, varies in
duration, but usually lasts only a few seconds,
and in turn gives place to the
° Third Phase, in which the patient is
either subject to clonic convulsions, most
marked on the side of the Aura, or to the
most hideous contortions of the face and
limbs. In the clonic convulsions we would
recognise at once a similarity to those of
true Epilepsy: but the contortions, although
they sometimes resemble those of the minor
form of Epilepsy — the petit mal of Trousseau
— yet seem to be more characteristic of
the hysterical element in the case.
° In the last phase of the seizure we may
have a deep sigh, like that of the purely
epileptic patient, or tears and laughter,
symbolic of Hysteria.
This may be taken as the description of
a typical seizure; but we must be prepared
to witness many modifications of it in
different patients. For example: the third
phase, that of clonic convulsions or spasmodic
contortions, may be entirely absent, and the

attack may begin and end with the tonic spasm. Or, in addition to the contortions, there may be muttering delirium, during which the patient may repeat all the chief incidents in her life, or she may utter wild ejaculations that have reference to some fright or adventure she may have met with in early life; or she may be seized with what used to be called the "dancing mania". As a rule, as I have said, the third phase takes the form of contortions, that are themselves almost characteristic of Hysteria; but we must bear in mind that instead of contortions we may have clonic spasms, in which the lower and upper extremities, the head, and the lower jaw are convulsively contracted and relaxed, with a regularity that completely precludes the possibility of their being voluntary or purposely deceptive; and with a gradual slowing that is supposed to be pathognomonic of true epilepsy. In fact, in one case which came under my observation, and to which I shall have frequently to refer, the clonic convulsions were in every respect identical with those of epilepsy, and were believed to be such by the medical man who first saw the patient. But the different phases of the epileptiform

eizure are not the only phenomena that
make up the disease Hystero-Epilepsy. As
a rule, others are superadded that we do
not find usually in cases of Epilepsy.
One of the most important concomitants, but
one nevertheless which we might fail to
note if not forewarned of its probable
presence, is Anaesthesia, ~~and~~ which continues
to be present for some time after the acute
attack is over, ~~and which~~ is accompanied by
Ischaemia; the latter however only applies
to the integuments.
Another phenomenon, sometimes met with, is
the suppression of urine, which does not
depend upon organic lesion of the kidneys.
Besides the loss of sensibility in the skin,
there is usually obnubilation of the special
senses upon the side of the body on
which the aura arose, and an inability
to speak, which also persist for some time
after the paroxysm.
The Achromatopsia, or colour-blindness, may
be found in different degrees; so with
the loss of the senses of hearing, taste, and
smell; but the power of speaking is lost
suddenly, and regained as unexpectedly,
whereas the hearing, and perception of colours
diminish and re-appear gradually, as I shall

have occasion to show. In the patients whose case I have mentioned first, these phenomena were present on both sides of the body — the most delicious morsels placed upon her tongue were to her as insipid as distilled water; the most pleasing odours were undistinguishable; and the most varied and glaring colours all appeared to her aberrant vision, as black objects. Another accompaniment of the disease which must be noted, is that condition of rigidity of the limbs, to which the name "Contracture," has been given.

All these later phenomena of the disease may as I have hinted, ~~may~~ make their appearance at very various periods in the course of the disease; they may be ~~remain for~~ longer or shorter in point of duration; they may come on suddenly, or comparatively suddenly, and may, disappear just as unexpectedly; they may remain for hours, days, or years; and recovery may take place at any time; as, after a paroxysm, or from any such sudden emotion as frights, evil news, and so on; or, as I shall relate elsewhere, by the application of various foreign agencies to the affected part, or parts, of the body. The various elements also in the diagnosis will be considered further on.

The following is the report of a case which I take as a typical example of the true Hysters-Epilepsy :— Mary M. at 18 years, domestic servant. Has always enjoyed very good health, and been accustomed to hard work, especially in her last situation she considers she has been over-worked, and to this she attributes the stoppage of the menses two months ago (about the middle of February 1878). About ten years ago she was bitten in the cheek by a horse; the wound healed, and the place is marked by a cicatrix. Twelve months ago she was standing on a chair which suddenly gave way; she fell, and suffered dislocation of the shoulder, which was reduced shortly afterwards. There is nothing further to be noted in her history, and she can give no reason for the stoppage of the menstrual flow two months since, except as I have stated the hard work. In her family history there is nothing special to be noted, all the others, have constantly enjoyed good health; her father is subject to rheumatism occasionally, her mother is troubled at times with Neuralgia. A child older than she (the patient) was, died of "Convulsions during teething"; none

f her brothers, or sisters, have ever had fits
f any kind, nor can her parents remember
anything of the kind in their respective
families. Patient is of a dark complexion,
ark hair; her face has a dusky-anemic
ppearance — if I may use the expression —
ood features, and intelligent, but not
eyond her station; she has nothing of
the languidly pathetic look, nor "sicklied
er with the pale cast of thought" as is so
requently seen in cases of hysteria. Body
ell nourished, skin not thin, and fairly
oist, without any eruption.
n Thursday last, April 11th, whilst at work
he felt a pain in the left side which shot
p to her head, and she lost consciousness.
he recovered from this, and had no attack
gain that day, but had during the night.
e following day she came home and since
ten the fits have been very frequent coming
every half-hour, or oftener. When first
en she was in bed, lying on her back,
nvulsions; violent contraction of the muscles
the face, with squinting, eylids being raised,
d there was no winking; the hands were
lf-closed, ~~and the~~ but not clenched, and
e arms raised and lowered again in a
gular manner. On pressing the closed fists

well down into the pelvis on the left side, she almost immediately regained consciousness without knowing that anything had been done to her and was much surprised at seeing us all standing beside her; she was quite composed, and said she was perfectly well, she did not shed tears, or indulge in any untoward emotion, although she knew she had had "a fit", and she thought she would go to sleep. Whilst speaking to her, pressure was practised in the same region as before, she screamed suddenly, and passed into the same unconscious state, accompanied by the same contortions of the face, and movements of the arms; and on resuming the pressure, she was again restored to the calm state. She uttered no cry during the paroxysm, and when it was over she had no recollection of any visions, or dream. I may note here that this abdominal pressure was the first thing which had restored her; and she had enough cold water to drown her, thrown upon her, by her friends and others during the paroxysm, without producing the slightest effect whatever. I gave her large doses of Potassic Bromide, and by the next night the fits had certainly diminished in frequency. She had a paroxysm

uring the time I was there which was
elieved by Abdominal pressure as before;
left, after giving her mother instructions to
pply the hand as I had done on the
ccurrence of a fit. I observed during the
tacks that the temperature was always
bout 97°F, or 98°F, and the pulse ranged
rom 70 to 80 beats in the minute.
n April 14th during my visit she had a
roxysmal attack, which came on very
uddenly while she was speaking. On
gaining consciousness, she found she could
t speak, and communicated to me by
riting what else she had to say; She was
ry much put out of the way, at losing
r speech, and by the slate, made
rious enquiries as to whether or not she
uld never regain it, and was very pleased
hen I answered in the affirmative. Her sense
taste on both sides was good at this time, the senses of
ght, and hearing were correct, and so were
mon sensation, and reflex action, there was
rigidity of the extremities. Urine was only
ssed once a day and not in very large
antity, bowels constipated, for which she
ceived an aperient. Respiration normal in
ry respect, heart's action regular. Pupils
ular, and respond to light; (they were

ilated during the paroxysm. She complains good deal of pain in the lumbar region nd a creeping sensation "up the spine", she as almost constant frontal headache which usually however limited to the left half; he left eye feels sore, and occasionally water runs from it, but there is no njection of the sclerotic, or conjunctival essels. She has had during the last few aroxysms, movement of the left leg, and hen sensible says there is much pain n the right leg. There is also pain in the situation of the cicatrix in her cheek where the horse bit her, she always, fancies she sees a horse, ust before she becomes unconscious, but knows it to be a hallucination.

pril 16th. The fits are now modified in a egree, they do not last so long, but she truggles somewhat violently during the aroxysm. While in a sensible state, on eing asked to raise the arms, she did so, t in an irregular jerking manner; but hen she laid them down again there was o further movement. Asked to raise the ft leg, she did so; and simultaneously here were jerking movements of the left m, which she could not restrain, until he leg was again at rest. In the evening

found she was a little deaf on the left
side. 17th She has no pain nor in the back,
r on either side of the abdomen; and no
reeping sensation along the spine. She
oved about a good deal in the house,
hich she could not do yesterday; for
ten, when she attempted the erect posture,
he felt giddy and weak, and was obliged
to sit down again. She has not regained
reeks yet, and she cannot protrude the
ngue, even by great Effort, beyond
e lips, although she can move it from
ide to side.

ext day I found there was contracture of
oth legs, and she cannot move them at
ll, sensation is lost on the left side, but
t on the right, indeed on the right she
t the prick of the needle acutely, and during
e testing she was blindfolded. There is no
ntracture of the arms, and sensibility is
ormal; thermal sensibility lost on the
ft leg. I discovered that the perception of
lour was at fault on the left side, if shown
ue she calls it red, if she is shown white
yellow, she says it is red. Also on the
t side she has lost the sense of smell, but
. applying a flower to the right ~~nostril~~ alone
e says "that is wallflower", without seeing the

bject. April 19th She has had only one paroxysm
ince yesterday morning, and since that
he has recovered the use of her limbs, and
he sensibility in these is normal. She has
lso regained speech, which left her again
bout two hours afterwards. Her colour-perception
lso rose, all colours to her appear black. The
horeic movements in the limbs have now
isappeared. On April 19th I saw her again.
he still complains of headache which is
onfined to the left half of the forehead. She
as had no fit since my last visit.
Having witnessed some of Prof Charcot's
emonstrations on patients having hemi-
naesthesia, with obnubilation of some of
he special senses, I resolved to try the
ffect of some metals upon her. I applied
ilver, Copper, Tin, Zinc, Iron, Lead and
latinum without any result. On the same
ase (below the chin) I placed two Sovereigns,
olden
nd in ten minutes she had twitchings
the mouth, and after two or three futile attempts
he was able to speak. I next placed the
ame metal to the left temple, and she
uickly began to perceive the different colours
hown to her: and although she regained
his faculty in so short a time that I could
t note the order in which the perception

f the various colours returned, I was able
n another occasion, to find, that they
eturned and dis-appeared again in
trictly mathematical order. Three sovereigns
ere then placed round the left leg, which
as at this time rigid as well as the right
e, in a few minutes there was complete
obility of each. I took pains to note the
turn of speech as produced by the
plication of the metal. To-night for
half-an-hour there was no perceptible
fect, in forty minutes there were movements
f the muscles of the arms and jaw, which
ere uncontrollable, these continuing for
few seconds, cease: after a lapse of five
inutes they return, and the patient as she
ppears to us is making attempts to speak,
ch as we have seen a bad stammerer;
ut # they are not produced in our patient
y an effort of the will. This takes place
six times, then there is a long
spiration, and then she ejaculates,
-dd-dd-doctor! After this she will
nverse fluently enough, until it may
be she has another fit, and then she
ll first as suddenly, lose the faculty.
course she can protrude the tongue from
e mouth now, without any extra effort, showing

hat the loss of the faculty, or I should rather
ay the power of speech is due to the
ntracture of the tongue, and by this term
ntracture I mean rigidity, for it is not
spasmodic contraction I think such as
e find in Tetanus, for the legs have
o appearance of violent contraction, but
ey are rigid. Yet she has had the sense
taste to-day perfect on both sides, she has
mplained of a bad taste in her mouth,
hich I believe is due to the Bromide
Potassium.

lthough the application of the gold at first
is the means of restoring the Special senses
r a time, I found that as the fits became
s frequent in occurrence, and the loss of
ose senses also less frequent, so the metal
emed to lose its power, in fact about ten
ys after I first saw her, I tried the gold
nder the chin and after three hours
here was no return of speech, merely a
eling of numbness". I applied the
ntinuous current of a battery, when the
ower was restored in a few seconds. I gave
r Chloride of Gold and Sodium to take
ternally, and occasionally used the battery,
e discontinued the Bromide. She continued
improve under this treatment, the fits

became more and more isolated. At the end of the month she was apparently in good health, the catamenia re-appeared and the other symptoms dis-appeared: at the end of three months she had no further symptoms of disease. It is now twelve months since she was under treatment and she has enjoyed good health during this period.

In my notes of this case I have appended the results of Ophthalmoscopic examinations from time to time, which amounted to nil. The fundus was if anything somewhat pale, the optic disc was clear and defined, without any haziness, and the central retinal artery and branches and the veins were not enlarged.

On one occasion, about two weeks after her illness began I conducted some experiments with a Chromic Acid Battery to test the electric sensibility. The measurements were taken with a very delicate Astatic Galvanometer and Wheatstone's bridge, registering 1 Ohm in 50 000.

R. Resistence at the angles of the lower jaw = 12,200 Ohms. The electrodes for obtaining proper contact consisted of two sovereigns wrapped

in white blotting paper, moistened.

c - Resistance between two electrodes (without the blotting paper) at the articulation of the lower jaw = 160,000 Ohms.

d - Resistance between two electrodes placed over the Radial artery at the wrist, on each side, = 230,000 Ohms. This was without the blotting paper.

e & f Same as the last with the addition the skin being well sponged to remove grease &c and the electrodes wrapped in moistened blotting paper. Resistance 142,000 Ohms.

The reduction of the resistance in the last experiment when compared with the third is very striking, and shows that the skin must have been very dry. The resistance however is still very high, for out of a great number of experiments upon healthy persons, I have never obtained a resistance greater than 30,000 Ohms, and this I may add is very rare, the average I have found to be about 6,000 Ohms, varying at different times from 5,000 to 7,000 Ohms.

The few notes I append relate to the mother of this patient. He was a robust, healthy-looking lad, about eighteen years of age.

He was passing along the street one night in
he company of a friend, when a man
ushed out of a court, and gave him a
evere blow on the head with a stick. He
ell upon the pavement insensible, but
uffered no further hurt, as his companion
ad only kept off his assailant, but
anaged to break his fall to some
xtent. He was taken home in an unconscious
tate and I saw him shortly afterwards,
hen he was quite insensible and seemed to
e suffering from Concussion of the Brain.
e remained in this state for about two
ours when he rallied sufficiently to be able
o answer questions; but before many minutes
ad elapsed he had a convulsive attack,
nd struggled violently. This passed off
nd he was again quite sensible, he took
hirty grains of Potassic Bromide, and
en we left him, having left word that the
ame dose should be given every hour in the
ame dose. The paroxysms came on very
requently until 2. A.M. and they
esembled very closely the fits that his sister
ad previously been subject to. From
o o'clock until eight he slept soundly
ut the breathing was not stertorous.
When he awoke, he almost immediately was

ized with another paroxysm. He
merged from this, but had another
ttack in the afternoon. In the evening
the hour of visit, he had not had any
more fits, and in consequence, the
romide was discontinued.
The following day he said he felt quite
ell, but by advice, he did not go to
ork that week, the following week
owever he did so, without permission,
ut from frequent inquiry afterwards, we
ever found that he had any after-
ymptoms, and at the present time
(April) he is in good health, so far as
e knows.

Shortly
We will now give the results of further
periments upon M. sister of the last
onducted at a recent date, (above ten
onths after recovery from her illness).
With the same battery and galvanometer
were used in the first experiments, and
ing the sovereigns as the electrodes, and
ot a "resistance", over the radial artery
the wrist, of 1440°. This however was
ied again, with the skin moistened,
nd then the galvanometer registered
nly 30°. At the angle of the lower jaw

nder the last conditions, and at the
tuculation, the resistance was so small
hat we could barely get an indication by
e galvanometer. Thus we found that
he "resistance" was very much diminished,
n compaing this with former experiments,
taking into account of course, that the
ry skin was the cause of the high
esistance (140°) recorded above, and
easily came to the true result by
onging the skin. We made a note at
he time of the fact, that the patient
perienced a tingling sensation in the
kin over the chin, a short time after
e application of the sovereigns, and
r coned perceive the muscles at the
ngle of the mouth contracting very
orcibly. This shows that the current
om the gold, affected her now, as
t would any other person in
rdinary health, and as it did in
r case, at the first, before the
nesthesia, and Contracture became
o highly developed.

We have notes of three other cases of
ysteo-Epilepsy, the symptoms in all
eing very well marked. They have only

ecently come under our charge, and
annot be taken at present as complete
amples, but in another part of this
aper, we have considered their
ymptoms as well, and have taken
rom them, as well as the two cases
eported, evidence in support of the
iew, which we take of the pathology
f the disease, Hystero-Epilepsy.

It will be as well to explain at this
tage, that a short account of this case
as given by me in the "British Medical
ournal" of February 8th 1879.

Le nent is a case which will be seen to
eemble the last one in many respects, but
at in all.
Mrs A. at 30 years. Has been married five
ears, and her youngest child is sixteen
nonths old. She has never been in very
bust health, but at the same time does
ot remember being the subject of any
ecial disease; She has been troubled
ith "indigestion and nervousness".
er mother and father are alive. The former
as enjoyed good health, and so has
e latter excepting for a laryngeal affection
e principal symptom of which is loss
f voice, which he has suffered from for
ome years, and which some London
hysicians told him was due to an
ffection of the nerve. The patients'
husband is a weak-looking man,
nd the children have not a healthy
ppearance.
The first time there was anything particularly
rong with her, was during the night,
hen her husband was awakened by
aring her moaning. He made ineffectual
ttempts to rouse her, and then called
r mother to see her, they tried further
eans to waken her, and then proceeded

to slap her face, and held Ammonia to
her nose, thinking she was in a fit. This
treatment producing no effect, they
allowed her to lie as she was for three
days (nearly). I saw her on the third day
after her first attack, when I found her
in the condition stated, namely of
unconsciousness and from which she
had not yet emerged. She was lying
in bed, and apparently unconscious,
moaning occasionally, but breathing
quietly. Eyelids closed, the pupils
were half-dilated and sluggish; the
hair dishevelled, the face appeared
calm, and did not then seem contorted.
The limbs were prone, and there were no
movements taking place.
Testing the sensibility with a needle,
she did not wince, and reflex sensibility
seemed to be absent in both legs. The
arms however showed a degree of reflex
sensibility. She still moaned occasionally
but not generally when the needle was
pushed through the skin. There had been
ejaculation of urine, but not of faeces.
As she lived some twenty-five miles away
from me, I did not return that day, but
paid her a visit next day, and took with

e, a powerful galvanic battery, the full
rce of the interrupted current from which
Viner, very few persons could bear for
ven a few seconds. The patient found in
he same condition as (of the battery) when I last saw her.
applied one pole, to each leg for some
inutes, powerful contractions of the muscles
the leg, and foot, were gradually induced,
nd there was redness of the skin when
he wetted sponges were removed. Dent
pplied them to the arms, with the
ame effect as in the lower extremities.
fterwards I galvanized various parts
f the body, and in the course of half-
n hour, the patient slowly recovered
nsciousness, and sensibility.
asked her if she was aware of anything
hat had transpired? she did not answer,
t signed that she wished to write, and
gave her material for that purpose.
then elicited from her, that she went to
ed feeling all right, and fell asleep but
ever nothing more until the present, and
hat by even powerful effort she could not
eak; when asked to show her tongue, she
deavoured to do so, but could not protrude
farther than the lips, although she could
ove it laterally. I re-applied the galvanism

o the legs, and she motioned that she
elt it very acutely, and then in writing
aid she could not bear it, and that she
id not wish another application. I now
oticed that her features wore a different
xpression altogether to what they did
hile she was unconscious, but I could
ot say wherein the alteration consisted.
ll I know is that from a remarkably
nplesant-looking woman, she was
ransformed into one of a somewhat pre-
ossessing appearance. I applied the
ontinuous current under the chin, which
aused contraction of the muscles, but did
ot restore the power of speaking. Removed
he electrodes, and before I left the house she
ould speak distinctly, and she gave me
full account of her history, such as I
ve given it above. She dwelt upon no
articular symptom, or group of symptoms,
nd except being very much annoyed at
he involuntary voiding of urine, she did
ot consider there was anything wrong with
er. Her own account of her previous history
llied with what I have related, as I have
id, and the latter I obtained from her friends.
left the battery with the friends that they
ight apply it, in the event of her returning to

the state of unconsciousness in which she had been that morning.

The following day I visited her, and she was well as I had left her. There was no anaesthesia now, and there was power of motion throughout. I prescribed ferruginous tonics, and did not see her again for three days. She had been unconscious again from the afternoon before, and was moaning a good deal. Her friends did not apply the battery, as they did not understand the working of it.

I tried compression of the abdomen in the ilio-hypogastric region on both sides without any result; so I applied galvanism again, with the result of restoring her as before, after a certain time. Her friends had some trouble in keeping the bed dry on account of frequent involuntary micturition. She stated that she passed into the state I found her in, almost insensibly, she was only aware of a painful sensation in the right groin shortly before. Bowels had acted regularly but not involuntarily.

I saw her two or three times afterwards, and she had one other attack which was relieved by the battery. She continued the tonic treatment, and had no more relapses, she

rapidly attained her previous fair state
of health, and during the last nine
months has had no further symptoms
of the kind.

The Pathology.

Under this head, we will in the first place consider some of the general principles of disease of the Nervous System which apply to Hystero-Epilepsy, or allied neuroses.

We most commonly find in hysterical patients that there is a condition of general anaemia, and want of tone throughout the whole system; they very often suffer from dyspepsia, suppression of the catamenia at times, or some such affection which they do not look upon as being of a very serious nature; and which they therefore do not usually call attention to, in the first instance, although it may afterwards give them the feelings which they are said to delight in exaggerating. To say we generally find them anaemic, but it is also to be noted that this is not always the case; they may, on the other hand, look strong and robust; they may have plenty of colour, and have, apart from the hysterical symptoms, a healthy appearance; yet we must also bear in mind that the person with an abundant capillary vascularity of the face, may, for all that, be anaemic; and indeed this is a matter of every-day

perience. However, apart from such
amples of apparent constitutional vigour,
the majority of hysterical persons are
undoubtedly the subjects of general debility.
We often find it stated that such patients
ave previously lived an idle and
xcesious life; but statistics of such
ases oftener go to prove the contrary, and
that there has been incessant fatigue,
insufficient nourishment, and want of
proper air and rest. Again, the cause has
een assigned to the unsatisfied sexual
ire, which, in such women as live in
ny circumstances, finds a ready subject
r its morbid manifestation; but if this
s so, how do they account for the large
umbers of hysterical patients in the St.
azare, who have, previous to their
dmission, lived a life of daily prostitution?
uch evidence goes further to show that
he cause of the disease lies in the debility
roduced by such excesses.
n anæmic persons we find, what is
opularly termed, "nervousness", which
eans, that the subject of it is liable
be much affected by any untoward
xternal circumstance, even of a very
rifling nature, which in a healthy person

ould not attract notice; these "nervous"
ersons are easily frightened, and such
things as a sudden noise, bad news,
nd so on, "sets them all shaking". Or, if
they are much left to their own society,
they brood over their various sensations,
and apprehend all kinds of dangers:
they are subject to cardiac palpitation
t night, and cannot rest; and, when
t last they are overcome by sleep,
they are disturbed by frightful dreams,
ich as some of the poets so vividly
describe. The morning brings relief so far
s these are concerned, but the victim is
ot refreshed by sick slumber, and feels
s if she had not been in bed at all.
Much the same thing occurs in chronic
lcoholism, where, through the blood-
poisoning, an anæmic state is produced,
by want of nutrition, which is no doubt
partly due to the direct effect of the
lcohol upon the corpuscles of the blood.

In whatever way the blood is deteriorated,
hether by the abuse of certain drugs, as
lcohol, Opium, &c, from want of proper
supply of daily food, or from comparative
bsence of assimilative power in the

ystem, we shall have the same
esult produced, namely, Anaemia, or,
nore properly, Spanaemia.
Given an individual, in whose system
this general weakness exists, we have,
thereby induced, a susceptibility to
isease.
Proceeding in this direction we have in some
ersons what is termed
A Diathesis —, a peculiar state
the constitution, which is hereditary, which
an hardly be defined, and of whose ~~the~~ ultimate
ature ~~of which~~, we have little knowledge,
manifesting itself in the body, by a
endency not merely to certain diseases, but
diseases affecting a portion or portions
the body which apparently have a
tronger affinity for the disease than
ther parts of the system. As examples:
e may take the woman who dies of
malignant disease of the Uterus, Mamma,
. In her male offspring, we expect to
ind the same disease showing itself
n the Testis, Stomach, Liver and so forth,
ut still of the same malignant type.
Again, a man has Gout; in his daughter
e expect to find ~~her attacked~~, not ~~by~~
nt as in the parent, but ~~she may have~~

~~[illegible]~~ derangements of the Genito-urinary system, exhibited as Menorrhagia, Amenorrhoea, and the like, which have for their origin a gouty "diathesis"; and the hereditary nature of which is often proved by the beneficial action of certain drugs, which relieved the father's gout, but which in a female suffering from the same disorder, (Amenorrhoea &c) with a different origin, would have no effect whatever.

If we had to give a description of that state, termed "diathesis", which in one, shows itself by a tendency to disease in one system, and in another, to disease of another system, we could not do it without knowing what constitutes individual temperaments, of which of course at present we know nothing.

Now in a woman, in whose family there is a trace of disease of the nervous system, such as Epilepsy, we will find that whatever disease she may be affected by, there is an inherent tendency in her, to disease of the Nervous system; and that, ~~whatever organ is diseased~~, this system will be affected more or less by the morbid condition; when, in another

erson, it would not. Perhaps I
houed not include here reflex neuroses,
uch as traumatic Tetanus, although,
e we have not, in subjects of the last
disease, a special susceptibility of
he nervous system, it will be difficult
o explain why many patients have
similar injuries, and yet only some
f these suffer from Tetanus.

Continuing with the individual
ho has the tendency to nervous disease;
f an anaemic condition of body occurs,
he nutrition of the nerves, and nerve
ntres, will suffer deterioration in the
irst place; and then we will find
he special diathesis showing itself;
here will be Anaemia, with all
its symptoms, plus the special
factor — the Epilepsy; and, in this
ay, there may succeed such a
ombination of symptoms, as may
well distract us in our attempts to
nalyse them.

That some diseases select certain parts
one of the systems of the body more
han others, I think we cannot have
better exemplified than in the action of
ome drugs. I have already mentioned

cohol. - Opium affects the cerebral
ntres, producing at first mental
citement, and afterwards stupor.
conite acts upon the Spinal cord,
nd spinal nerves: Belladonna
a sedative to the Spinal cord, and
ill produce paralysis too, but upon
he brain centres it acts as an
citant. Strychnine also affects the
pinal cord, without touching the
erebrum. That these drugs do
isplay elective affinities, proves
hat there are material differences in
he composition of these systems. We
n at any rate demonstrate so much,
hough we cannot discover their
ature. Their effects, certainly, are
ansitory in medicinal doses, and in
rious doses rapidly fatal; but,
ith these, as with Alcohol, their
ntinued use, or abuse, will give rise
a morbid condition of the system,
hich lasts after they are discontinued,
utting in disease, which then
oceeds by itself. The brain is
lected in some people more than in
hers, when disease attacks them, and
his is frequently observed in diseases,

such as Acute Rheumatism, and
ague, or ~~from~~ in general Exhaustion,
produced by great and sudden loss
of blood, as in Post-partum hemorrhage,
and some wasting diseases.

Although we may not always be
able to distinguish, or discern, any
difference in the external appearance
of the person having a nervous diathesis,
yet, in the mental character, we will
find a susceptibility to Emotion, which
is peculiar, can be traced through-
out life, and which, in itself, constitutes
a difference.

I have given the instance of the daughter
of a man who suffered from Gout, suffering
from the same; not as gout in its ordinary
signification, but from Chlorosis; and the
successful treatment of both, by the same
remedies; showing that the nature of the
two was the same. And, as regards the
transformation of certain diseases, — without
going into an account of the evidence
which has been given to show that such
occurs — I may mention the fact of
Rheumatism, Epilepsy, and Chorea
being allied forms of disease, and I
believe further, that they are manifestations,

in different parts of the system, of one disease; although the absolute proof of this is still wanting. It is, however, easy to understand that, if the father had rheumatism, and the mother was of an over-sanguine, excitable disposition, their daughter might have a combination of the two dispositions. This is shown very well in the case of the lower animals, and breeders are careful in their selection of the sire and dam, that they may be able to produce offspring having certain qualities.

In the first case I have reported (Page) these relations are well-marked, and the case of the brother, in whom more than ordinary symptoms occurred from an ordinary accident, is a proof, I consider, of the tendency which ran in the family. This lad, however, being otherwise strong and robust, the symptoms were transient, and he soon recovered; but, should he be afterwards affected by disease, I should, whatever his ailment, look to the nervous system, for a key to some of his symptoms, if not all.

In the case of the girl, we had a hereditary tendency present, although

stent; and she having by overwork, and
perhaps insufficient food, produced a
state of anaemia, we find an excitation
of that latent tendency, producing the
symptoms of disease

Passing from these general
considerations of nervous disease, bearing
upon the subject of this essay, we may
proceed to a study of the special
features of the disease Hystero-Epilepsy;
and shall consider, first, the subject of
Anaesthesia; previous to which however,
it will be well to glance at a peculiar
condition which is seen in these cases, namely,

Ischuria.

This is sometimes a very prominent
symptom; and one which, at the same time,
is one of the most difficult to explain of all
the phenomena of this disease. It has been
observed now in a good many cases; some
of which, it is true, turned out, or have been
surmised to be, spurious; but the number
of real cases which have occurred, and
where precautions were taken which
entirely precluded the possibility of deception,
leave no room for doubt on this point.
The most sceptical would, I think, be satisfied
if they saw such a patient confined in

straight waistcoat, and watched by eagle eyes night and day - much the same as a desperate, and condemned criminal might be; to detect any attempt at concealing any excretion; and this careful guard kept regularly for days and weeks. It has been done, but all to no purpose; for, in the true cases, there was no attempt at deception whatever; and long periods were passed without any urine being voided.

In many of the patients, however, there was vicarious urination, if I may so term it, which ~~was~~ is shown by the persistent vomiting of matters, in which the presence of urea was distinctly shown. One fact which is very apt to make us sceptical on this point, is, that in cases of Bright's disease, a day or two's suppression of urine is not only serious, but fatal; or even in diseases, not implicating the kidney at all, where the ureters are blocked - for example by calculi - if, in a few days, there is not relief given, by the passing away of the stone, very serious symptoms, especially of blood poisoning, may supervene. Still, there have been exceptions to the fatal termination - at least in such short periods of suppression from renal disease; and I believe

that in
the latest recorded case of urinary disease,
where there was total suppression of
urine, the period for which it lasted
was fourteen days. Such being the
last, we cannot but be surprised, when we
find the hysterical patient with complete
suppression for a much longer period
— even months — without actually suffering
from any serious symptoms whatever.
In the same class of patients we also find
long periods of fasting, without any loss
of flesh, and, strange as it may seem,
there is no wasting of the muscles; neither is
their electric sensibility in many cases
diminished. In hysterical anuria there
is not suppression of urine, in the ordinary
sense of the term, for there is no disease of
the kidney; and when the flow is re-established,
there is at once the full secretive action of
this organ. There is not obliteration of the
ureters; so that we can at once eliminate
the renal apparatus from our consideration.
There is no anasarca ever observed, so we
cannot say that there is an accumulation of
urinary fluid in the tissues; and in the
analysis of the blood of such patients we do
not find the products of tissue meta-
morphosis, which are contained in urine

occasionally, but not always, there is, as I have before mentioned, vomiting; and the vomited matter has been shown to contain urea, and some other substances contained in urine. But what are we to make of those cases where there is not even vomiting, nor increased perspiration, nor yet purgation? By exclusion, we are left to one consideration; and that is, that the explanation of this phenomenon is to be found in certain portions of the nervous system. In arguing this point we are to remember, that we know there are distinct fibers in nerves, which preside over the assimilative functions of the organs of the body; that they have - some, the power to depress, others, the power to exalt, these actions. Again, we are aware that certain drugs have the power to cause increased flow of bile, of saliva, and so on; and there are others which so act as to block up these secretions. We know, also, that the kidney can be so influenced by some agents; and thus we infer that there is an action of the drug upon this system of nerves by which their action is exalted, or depressed. And in Anuria, it is evident that there is an influence of the same kind exerted upon

the same system of nerves.

But the question may be put, "What of the waste material of the body? There is no outlet for it from your evidence - What becomes of it"? We argue, there is little, or no, waste of tissue in such cases; and this seems conclusively proved by the fact that these patients sometimes eat nothing and yet suffer ~~from~~ no diminution in weight. And, in those instances where there is ingestion of food and water, we find that those are the patients in whom there is vicarious elimination of urinary constituents.

Again, admitting that the cause of anuria lies primarily in a morbid state of these nutritive nerves, in what does this morbid state consist? That, we cannot say positively; but, further on, we may be able to see that one cause runs through the whole group of symptoms - namely, lost, or perverted, action in these nerves, or nerve centres. The action of Tea, Coffee, and some other antitriptics, shows that they exercise a controlling action over the nerve centres which have to do with tissue changes; and goes so far to support our view, that we can perceive that if this effect upon these centres was pushed to the extreme

we should stop the transformation of tissue into waste products; and there would be precisely such a condition as we have in the hysterical patient. What this action upon the nerve is, beyond what we have stated, we cannot tell; for, as in the Study of Medicine, we cannot proceed without a fundamental Knowledge of Anatomy, Physiology, and Chemistry, so we cannot tell the ultimate physiological, and pathological, states in these nerve fibres, until we have a Knowledge of their more intimate structure, and the laws which govern their functions. However, we can say something about it, when we study the next phenomenon in Hystero-Epilepsy, namely,

Anæsthesia, or Hemianæsthesia, as it may occasionally be termed when limited to one half of the body. This, as we have seen, may come on suddenly, and may not be immediately noticed; in fact the physician often discovers it to the patient; and it may disappear again in the same manner. It shows itself generally on one side of the body first; and, in different parts of the body, we can show the exact line of demarcation. It also differs in degree: for we sometimes find

here is insensibility to heat, or cold, and also
at there is coldness, and pallor of the skin, on
he affected side. The anaesthesia only affects
sually, the cutaneous structures; and a strange
mptom of the insensibility is the absence
haemorrhage when the skin is wounded,
s by thrusting a needle into it. That
is is not due to any haemostatic action of
e needle, is shown by passing it right
rough the affected limb, when blood is
oticed to flow as usual. The mucous
embrane on the anaesthetic side is also
fected; and the organs of taste, smell,
ision, and hearing, are either enfeebled, or
e senses are lost. This insensibility does not
pear to affect the viscera; for, in one of
ur patients, pain was complained of in the
omach; and also we remarked a painful
nsation referred, by the patient, to the left
io-inguinal region. This pain we considered
be situated in, or to emanate from, the
ft ovary; for the following reasons: —
here is often anaesthesia of the skin; the
muscular wall at this part may also
pricked with a needle, and no pain,
very little, felt; this shows the pain is
t in the skin, or the muscles, therefore
must penetrate farther. What are the

organs which, in the adult female, lie in this part of the abdominal cavity? In the right iliac region we have the Caput caecum, in the left the Sigmoid flexure of the Colon; but this is not all; there are the ovaries. Now in our anatomical study of the dead body, we come upon the organs of generation all lying, as it were in a heap, in the pelvic cavity; but, during life, the Uterus lies more vertically, with the broad ligaments, and fallopian tubes, extending out on either side in a state of tension, so that the ovaries come to be one on each side, against the ridge formed by the inlet of the pelvis, about midway between the Pubic symphysis and the Sacrum. This position would be indicated on the external abdominal wall by a line, being drawn between the anterior superior iliac spines, and ~~let fall~~ let fall a perpendicular, to this from the cartilage of the ninth rib to the middle of Pouparts ligament, ~~If now~~ and we were to pierce the abdominal wall with a long needle, at the point where these lines intersect, we would most probably transfix the ovary; now it is precisely to this spot that the sufferer refers the pain; and it is fixed, that in all these patients the

same place is referred to, as the seat of the
ain; hence we regard the pain as being
situated in the ovary; and it tallies with
he result of palpation, namely; that if
the hand is pressed downwards, in the
irection above indicated, when we have
vercome the resistance of the muscular
arietes, which is sometimes great, we
me upon the brim of the pelvis; and then
e are able to discover a rounded body,
hich is sometimes large, and sometimes
naller: further, we find that the pain
perienced is a peculiar one, and shoots
p to the head; and the patient will tell
s not to press hard upon this oval
ody, for she knows from experience that
it is the seat of the pain which, radiating
n an upward direction, is the precursor
f a paroxysm; and constitutes in fact
the Aura hysterica. That it is not
ue to pressure of feces in the colon, is
hown by the fact that it persists after
horough evacuation of the contents of the
ntestine; and moreover by the fact of its
ometimes occurring on both sides.
When the pain in the ovary exists in the
eft side, we have anaesthesia of that side;
nd when in the right, the insensibility is

upon the corresponding side; and in some instances the pain is present on both sides, and we find the Anæsthesia affecting the whole or nearly the whole, of the body.

Now, as regards the Cause of the Hemianæsthesia. We find it in certain cerebral lesions which affect the posterior part of the "Internal Capsule", whether from cerebral hæmorrhage, Chronic Alcoholism, or Lead poisoning. [The Capsula Interna lies external to the Thalamus Opticus; and is formed, principally, by bands of white substance, which are simply the prolongation of the lower stage of the Crura Cerebri; these proceed to expand in the Centrum Ovale to assist in constituting the Corona radiata of Reil.] A case in point came under notice at the Hôpital Salpêtrière a few years ago. There was profound coma, partial right Hemiplegia, and complete right hemianæsthesia, and there was no response of any kind to stimuli applied to the skin. On the left side, both motor power and sensibility were retained; and there was no appreciable difference of temperature between the two sides. Death took place the day after the attack, and there was found a recent clot in the left hemisphere, taking a linear direction

rom the anterior extremity of the caudate
nucleus to about four centimetres from the
posterior part of the occipital lobe. It involved
the whole of the Island of Reil, as well as part of
the lenticular nucleus of the Corpus Striatum,
the caudate nucleus, and Optic Thalamus,
were free. Prof. Charcot, at that time, showed
the longitudinal form of the clot, as being
determined by the direction of the bundles of
nerve fibres between the lenticular nucleus
and the "External Capsule".

We may compare, absolutely, the hemi-anesthesia
of these lesions to the hemi-anesthesia of
hysterical patients; for it is frequently made
to disappear by the same superficial means,
by Electricity, Magnetism and Metals, as
in the hysterical form. Prof. Schiff, of
Geneva, has quite recently performed some
experiments on dogs; and has given an account
of these in the "Progrès Medicale", and, without
re-capitulating his reports, we may here take
his principal results as bearing upon, and
supporting this view. By irritating the part
of the brain indicated above, he succeeded in
producing anesthesia of the limbs; and by
applying a galvanic current to the animal's
limb, again for a time restored the sensibility.
And, in Hysteria, we must remember that

although it appears and disappears, yet the
hemi-anaesthesia is the most lasting of all the
symptoms. Hence we may conclude that, in
the Hemi-anaesthesia of Hysteria, we have a
functional alteration of the same portion of
the brain.

In cases of Cerebral haemorrhage, etc., involving
the Optic Thalamus, or parts adjacent, we
usually find a hemiplegia affecting the
limbs, the trunk, and parts of the face,
opposite to that on which the lesion of the
brain exists. There is also vaso-motor paralysis,
as shown by the increased temperature of
the hemiplegic side; and it is only in some
of these that there is loss of sensibility as
well; but in the following case, which we
had under our charge some months ago, we
have an example of cerebral lesion where
vision, and hearing, at least were affected.
A man, aged fifty years, was, while at
work, taken suddenly ill, and was removed
to his home; he was not then unconscious,
but was unable to stand. He complained of
pain on the right side of his head; there
was dimness of vision, of which he complained
very much; and of "a rushing in his
head". There was left hemiplegia when we saw
him; but the skin was quite sensible. On

the following day, at the time of our visit, he was asleep; he had slept soundly all night; and we had great difficulty in rousing him to answer questions; we had to speak very loudly before he could hear; he could not see objects at any distance; he could not use the limbs on either side; and the sensibility, on both sides, was very much diminished. The temperature was then slightly below the normal on both sides; and he still complained very much of the pain in his head. The following day, he was so insensible that he could not be roused. Sensibility, both ordinary and reflex, was absent; and yet his breathing was not stertorous. Both pupils were partially dilated, and did not respond to the light. In the evening he died; but as we did not see him again, and as the friends were ignorant people, we could not learn the exact condition immediately preceding death; but "that he had died in much the same condition as when we had seen him during the day". An examination of the brain, which was all we could manage, revealed a large clot, which appeared to be of recent formation, and which was found occupying a place in the white substance of the upper

part of the brain, on the right side. Posteriorly, it reached as far as the Corpora Quadrigemina, and, anteriorly, to about an inch beyond the Anterior Commissure. It did not extend upwards to the surface of the convolutions, but, below, the cerebral substance was much broken up. At this stage of the examination we were disturbed by the importunities of the friends; and had, very reluctantly, to desist from further investigation; still, I consider that there was sufficient to show in this case, that the anæsthesia, which we observe in hysteria, is also seen in cases of cerebral apoplexy; and that in addition a paresis, or paralysis, of special sense may also occur.

What have we then to enable us to differentiate between purely functional alteration, so-called, as seen in Hysteria, and the cases where the same symptoms are due to hæmorrhage etc.?

The age of the patient cannot be considered, for Hystero-Epilepsy may occur at any age in the female; and neither occupation, nor the circumstances attending married life, have any effect in preventing the occurrence of this affection. One symptom, which has been stated by Prof. Charcot (Diseases of the Nervous System Vol. II) as showing

ncephalic lesion, is a rythmical convulsion, which occupies one-half of the body, including the face in many instances; which has the appearance of the jerking movements seen in Chorea; sometimes that of the tremor of Paralysis Agitans; ~~but~~ we have at present a case under observation, of a young girl in which all the symptoms usually ascribed to Hystero-Epilepsy are remarkably well seen; in which these very jerking movements are present, sometimes for two hours at a time; and the only difference we can perceive between such a case and one of M. Charcot's, at least so far as this Agitation is concerned, is that, in our patient, it only comes on when she is unconscious. Besides, we must remember that the same thing, or something very like it, occurs in children suffering from intestinal worms; of which, too, we had a very good example, in a boy about ten years old, who was cured of, what had been called, Chorea, by administering an anthelmintic; the movements were certainly very like those of Chorea.

What, however, may assist us in distinguishing such cases of anæsthesia in Hystero-Epilepsy, from those in which it is

due to grave cerebral lesion, is the presence of ovarian hyperaesthesia, which we have never ~~been absent~~ missed in well-marked Hystero-Epilepsy; and above all the primary paroxysmal symptoms. Further, we have an element of diagnosis in the electric tests which we conducted in our patient M.

We found that in the first trial of the gold, we were successful in producing sensibility, when with a *stronger* current from a battery we produced no effect; and we could not understand this at the time. A much stronger current still did act, and that very quickly. The current from the gold was, when measured, very small; indeed we could scarcely get an indication of its strength upon the dial of the delicate Galvanometer. Now these facts were supplemented by others. We measured the amount of "resistance" in our patient, to the galvanic current. At the wrists, where there was a good circuit, and with all possible precautions, we measured the "resistance" as 142°. As time passed on, and our patient became anaesthetic, for much longer periods, and having very ~~much~~ short intervals of relief from it, so were much stronger currents required to replace the sensibility. It is also to be noted

here, that having no previous experience of the amount of resistance offered by such patients, we could not possibly give the patient any notion of any expected amount of resistance; we did not know whether it should be greater, or less, than in health; we have since this, of course, observed that in every similar case the resistance is very great.

After a time however, (and we must remember that she was taking Chloride of Gold, the action of which we will consider afterwards), the anaesthesia gradually attacked her less suddenly, and not oftener than once, or twice, a week; and that she was free from it for long periods; and again when she lost the power of speaking, she came to the house, and it was always restored by the application of the continuous current of the battery. Very recently, and after having enjoyed good health for ten months, we have a repetition of these experiments, and with such a result as we had expected, namely, that the resistance offered to the current is very much reduced, and, instead of 142° at the wrist, we have now only 30°, an amount which is sometimes registered in persons who

consider themselves in good health; although as we have stated in the relation of the case, the usual "resistance" measured in healthy persons is from 5° to 7°. It has been shown in some of these patients that by the application of the metal selected, or galvanism, to the affected limb, there is restoration of the sensibility on that side; but the opposite, previously normal side, is rendered anæsthetic; and it is termed the "phenomenon of transfer". In the present instance, however, it was not so: sometimes the anæsthesia was on both sides, sometimes only on one. When it was double, the galvanic current restored the sensibility on both sides; and when only one was affected, the opposite side was not paralysed by the restoration of this one. In the report of the case alluded to we have omitted one incident.

One morning this girl was unable to speak, but was sitting in bed sewing: her attention was aroused by hearing a scratching sound, (she was then only deaf on the left side) a mouse skipped across the floor, and this so affected her, that she screamed and called her mother; for being, as she thought, unable to move from bed, she was afraid the creature

roned jump upon the bed. She was however quite pleased afterwards, when she found the sight had renewed the power of speaking. This was the first time it had been restored without the applications before mentioned, and she requested her mother and others to frighten her some time again, when she was in that condition. I may as well give the sequel of this at this place, namely, that the occasion for the frightening action did occur again in a day or so, and that every member of the household tried in turn to frighten away the anesthesia, but failed signally, much to the patient's disappointment, and the amusement to some extent of her friends. I may go into detail so far as to say that her father once entered her room feigning all the appearances of wild intoxication, with a stick threatening to thrash her for deception, there was no motion, for she wept a good deal at the notion of the castigation, but no effect was produced upon the anesthesia. Dr. H. Jake, it is I believe, has puts forward the theory of "expectant attention" so strongly, to account for all the phenomena of Anesthesia, and there is no doubt he has grounds for his assertion in a few instances. He quotes the instance of bread pills producing purgation, when such action was looked for, but

would he argue from this that Epsom Salts, or croton oil, would not purge, unless there was such a result expected? If ever there was a piece of evidence brought against the theory of "expectant attention", which is after all only a phrase, it is in this last experiment of our patient's own, who argued from her experience, that a good fright would at any time restore her.

If we could have measured the electric "resistance" in this patient at the first, there is little doubt, from the course the disease ran, that we would have found that it was not very great; for the small current from the gold, a short period after her first attack, (three days) was sufficient to restore sensibility; and at this time the ovarian hyperesthesia, and pain in the head, were what I may term, at their height; that is time passed on, and the resistance became greater, so the hyperesthesia diminished in intensity; and at last disappeared altogether; and from this time, also, the sensibility became restored, and the electric "resistance" approached more to the normal; consequently we see a corresponding ratio kept up between the Anaesthesia and Hyperesthesia, which shows that these two symptoms, are very closely related; and that when the one was

most intense, the other was present in its last degree, and vice versa; and with a return to a healthy state they both disappeared.

Although the treatment of this hemi-anaesthesia by metals has been replaced by other agents, it is still instructive to notice the part played by them. It was thought quite inexplicable that one metal showed effect the sensibility, while others failed; and it was put down to a specific action of the metal: but as we learned to produce the same results by electricity and magnetism we began to doubt the specific nature of the metal. Now, in testing with these metals, we found that some currents were stronger than others. That from copper being notably very strong, in comparison with others; and the current from Gold was extremely weak, as we have already seen; and we easily conclude that the action upon the body is an electric one. For instance, in the case already gone over, the gold acted at first in a few seconds; and at that time, we found a current of the same force, from a battery, produced the same result, when a stronger one proved not; but that this stronger current was afterwards

ffectual, when the application of the gold
for hours had no effect. By a symptom
we had presenting itself we could almost
measure the declining action of the gold
as the case progressed, which was, that
at first a tingling sensation was produced
in the skin, Exactly like that produced
by the very weak electric current from the
battery; and this tingling another
time only left a "benumbed" feeling in
the skin where it was applied; and
lastly when the stronger current was
required to affect the patient, half-a-
dozen sovereigns were kept on for hours,
without the patient experiencing any
sensation whatever in the part, nor
restoring the sense; in this testing we refer
more particularly to the application of the
gold to the chin for the purpose of restoring
the voice, when also, the skin at that part
was not anaesthetic. We shall return to
the theory of "Expectant Attention", and the
cause of hemianesthesia, after noticing
some other symptoms. We may now
direct our attention to the impairment of
vision, ~~or hysterical "Daltonism"~~ as shown
by the hysterical "Daltonism", which
is commonly observed in some of these

patients, and which has been termed
Achromatopsia.

On account of circumstances
connected with the patients, we have not been able,
unfortunately, to examine opthalmoscopically
more than one patient out of four in whom
this phenomenon was present. In this one
however the frequent examinations ~~which~~ which were
made revealed no morbid condition of the
~~retina~~ retina, or other part of the organ of
vision, at any rate so far as our experience
in such matters extended, which was not
inconsiderable; (this statement is made par-
enthetically, on account of the purpose for which
we give our evidence). This negative result of
examination with the Opthalmoscope, tallies
exactly with what has been reported by various
observers of the phenomenon of hysterical
achromatopsia. Moreover, at that time, ~~we~~
~~knew~~, in the absence of an explanation of the
affection, we should only have been too pleased
to have discovered some organic change to
account for it.

Not to recapitulate here what is already known
of the mechanism of Vision, we will only name
the colours perceived in the order in which they
are produced. The most simple colours are
red, blue, and yellow, the mixed colours are

range, green, and violet; and this is the
-der in which they are seen. Of course the
olour vision, as we know, differs widely in
ifferent persons; some perceive one colour more
han another, while others are colour-blind,
it is termed, and throughout life cannot
istinguish one colour from the others; although
ere are some instances recorded, of
ersons being colour-blind for many years,
d yet having gained the perception of
ifferent hues, at some period of their lives.
n our hysterical patient we found, that the
erception of the colours came, and went, in a
gular manner. At the time we first noticed
he loss of vision, she said everything passed
efore her left eye (the right being blindfolded)
as black: a sovereign was held to the left
mple; she first perceived red, and every
ject appeared red to her; the next colour seen
as yellow; the next, blue. Then, on being shown
n orange, which she had previously stated
o be a ball of black yarn, she immediately
old us it was an orange; she next perceived
reen; and lastly mauve. On another occasion,
hile we were testing her otherwise, she said
My dress is mauve-coloured I know, but it
ppears green to me now", then it became orange;
nd, as our attention was directed to this, we

found that this colour next gave place to
range, then blue, yellow, and lastly red, —
exactly the reverse order in which they were
required: for, in losing the perception, the
first to disappear was violet, and the last
red; in the return, red was the first to be seen,
and the last violet. In two other patients the
first seen was blue; and in one other the last
colour to be perceived was red. There cannot
be any deception in these cases; for, even if they
had been educated persons, and had been
conversant with the colours of the solar spectrum,
in the first case, at any rate, the colours were
not perceived in the same order; and further,
there is a constant order observed with all
these patients.

We found, when this phenomenon (Achromatopsia) presented
itself, that we could make it disappear by the
application of gold. Now, as in the anæsthesia
of the limbs, the metal required to be kept
applied for longer periods each time it was
tried, until in the end it had no effect; but
came ~~place~~ way to the more powerful current from
the battery. As it did not depend upon a
diseased state of the optical apparatus, and
as the sense of colour vision ~~colour~~ was regained
by the same means, as the anæsthesia was
displaced, we are bound to admit their

connection; and that they depended upon the same cause. The senses of smell and taste were also lost; so was the hearing on the affected side, (the latter also changing to the right side occasionally along with the dichromatopsy); and these also were regained by the application of the same agents, and at the same time. The cause must have been the same in all; in fact, they were only portions of the general anæsthesia; and ~~=~~ we can thus trace the cause to the same part of the brain. Even so far as our knowledge of the anatomy of the brain goes, we can trace fibres of the Glosso-pharyngeal, Olfactory, Auditory, and Optic nerves to the neighbourhood of the Optic Thalamus.

Of all the important phenomena of Hystero-Epilepsy, and which collectively form the disease, there are two which are nearly constant in their relation to the anæsthesia, already considered; these are, contracture, and hyperæsthesia; and we will take first the latter, under the name,

Ovarian Hyperæsthesia.

This symptom makes its appearance at the very first, long before the first acute paroxysm of the

hysteria presents itself to the terrified gaze of the patients friends.

We have already gone over the reasons for considering the pain in the iliac fossa as proceeding from the Ovary. When the patient is quite conscious, and we press down upon the ovary, she complains of pain, which is of a peculiar nature, and which is characteristic. It is a complicated sensation, and the patient will tell us that that is the spot where she has felt the pain so often; at the same time, we find that it radiates to the Epigastrium; and this constitute the "first node" of the Aura hysterica. From this it passes to the region of the heart — causing increased action, and a corresponding excitement of the pulse. It then passes upwards towards the head; there may be a sensation of a ball rising in the throat; (the globus hystericus) this is the "second node" of the aura. There follows a rushing sound in the ears; and the pain flies to the head; dimness of vision ensues, and this may be termed the "third node", in so far as it is distinctly related by the patient that she heard this rushing noise, and everything was dark, before the

temporary
lost consciousness; the annihilation of the senses, shown by the unconsciousness, being the termination of the Aura. This is the course taken in most of these cases of Hystero-Epilepsy; but there are some in which it has a different position, at least in the "first mode" of the Aura. These others have points (in which the Aura commences,) in other parts of the body, such as, the top of the Sacrum, some of the dorsal vertebræ, and the intercostal spaces. We have at present a woman under our charge who has Hystero-Epilepsy: by pressing in the ovarian region, or upon any of the dorsal vertebræ, we will determine a paroxysmal attack; and by again pressing the same points, we can immediately control, and shortly stop, the convulsions. We come now to the explanation of this phenomenon; but previous to this, we may profit by a glance at the ~~the~~ symptom, which, through several centuries, attracted so much attention, namely

Hysterical Contracture

This usually accompanies the Ovarian hyperæsthesia,

but may remain after all the other phenomena of Hystero-Epilepsy have disappeared. It appears to be a rigidity of the muscles; not being a violent contraction of these, nor yet a paralysis. In our patient M. it usually assumed the hemiplegic form; but sometimes we noticed the right arm was contractured along with the left leg; or vice versa.
This contracture differs entirely from the paralysis due to cerebral lesion in the following facts; — We have no facial palsy; and there is no paralysis of the upper eyelid; the tongue also is protruded in a straight manner, and not pushed to one side, as it is in ordinary hemiplegia.
Again, in this hysterical contracture, we have the anæsthesia very often occupying the same side of the body; whereas, in cerebral lesions the loss of sensibility is usually on the side opposite the paralysis. Also, this contracture shifts about, as we saw in our patient; for on one day the upper extremities were affected. Above all we must look to the fact, that when we have this peculiar

contracture, there are always concomitant symptoms which enable us to diagnose it as hysterical contracture. There would be the hysterical paroxysms which occurred at first; the existence of ovarian hyperæsthesia; and the fact that it can be made to disappear by the application of the galvanic current; with the other phenomena of the disease, which we have already noticed. It is peculiar also that the contractured limb, cannot, if in the position of extension, be flexed; during sleep it continues in the same state, and can only be partially overcome by putting the patient fully under the influence of Chloroform. It may be recovered from, on the occurrence of any strong emotion, such as fright, sudden bad news, etc. and, on the other hand, it may be permanent. However, except in very long-standing cases, there is no atrophy of the muscles observed; and their electrical contractility is usually preserved.

As regards the compression of the ovary being the means of stopping the hysterical paroxysm, there can be no

doubt, but as to the reason why? we have not yet come to any definite conclusion. But the fact that the same effects can be produced by pressure upon different parts of the body leads us to infer, that the pressure must act upon the nerves; and that the restoration to sensibility in these patients, is the result of reflex nerve action.

We know that ligature of a limb will arrest the convulsions of Epilepsy, when applied the moment the phenomena of the Aura arise, in that limb. We know also from the experiments which have been conducted upon the lower animals, that reflex action of the spinal cord may be caused by irritation of the peripheral nerves.

Thus, if the lower part of the spinal cord, in a decapitated frog, (by which means we shall have, at the highest pitch, the reflex excitability) be irritated, we cannot excite contraction of the muscles of the superior extremity. And also in the frog after removal of the head; if the upper limbs be tightly ligatured we cannot excite reflex action in the lower extremities.

Then we have, as showing the connection

of Hyperæsthesia and Contracture, with the Phenomena of Anæsthesia, the fact that by certain metals, magnets, or electricity, we can reproduce the same condition, on the opposite side of the body. In

Conclusion

we argue, that in the Hystero-Epileptic patient, we have, to begin with, a certain diathesis, a hereditary predisposition to disease of the nervous system, and specially to a certain portion of that system; that may exist throughout life without manifesting itself; but in such a patient, any cause supervening to give rise to a debilitated state of the body, places her in such a condition, that any strong emotion will determine the Hystero-Epileptic attack.

Also, as in some of our observed cases, if any organic disease be present first, and the anæmic state be induced by this disease, then its symptoms will be rendered obscure, or at any rate difficult to differentiate, by the presence of the Hystero-Epileptic phenomena.

With regard to the actual seizure

and after-phenomena, we find:—
1° That there exists in the Brain a centre of morbid action, which is fairly well defined, and part of which we have noted as the "Capsula interna". That the first cause of the hysterical phenomena is an irritation of this centre, which results in irregular distribution of the nerve force to peripheral parts of the body; for example the ovary, and the muscles; that a further reflex irritation from this towards the centre again, takes place through the sympathetic nerves; and the centres of consciousness, and External impressions, are in turn affected; and the outcome is a convulsion of the body, which lasts until this irritation has subsided, temporarily, or altogether, ~~and~~ in the same way as the pain produced by a decayed tooth will last until the Extraction of the offending member. The Contracture which is present is caused also by the irritation of these centres, transmitted along motor fibres, causing contracture of the tongue, muscles of the extremities, and trunk, and Ischæmia; the latter

being due to contracture of the muscular fibres in the arterial walls. It may be said to be an accompaniment, (in all true cases to a certain extent) of the hyperæsthesia. The tonic spasm of the muscles, during the paroxysm, is of course quite different from the more permanent contractures, and appears to be due, as in Epilepsy, to the irregular discharge of motor force from the centre; it is as it were the first outburst of the storm.

2°

That this irritation in turn gradually fades away, and gives place to exhaustion of these nerve centres; and necessarily we have then loss of power at the periphery. This we see from the gradual dying out of the hyperæsthesia and its replacement by the Anæsthesia.

3° That the course of the disease can be considerably modified, if not cured, by the internal administration of Potassic Bromide. But of this cure we are certain, when we use magnetisms or electricity; and that by no means should we entirely discard

the internal treatment by tonics; and the beneficial action resulting from the internal administration of gold, (as in our case) etc., is explained, in some degree, by the fact that it acts, generally, as a tonic, or strengthener of the system; as shown by the return of the catamenia.

4°

That the "resistance" shown by such patients, (while anaesthesia is present), to electricity, demonstrates a ~~paralysis~~ paresis of those nerves which carry sensations; a further dulness at the centres; because the muscles are slow in being affected by the current which should be passed forward, along motor fibres, from these centres.

5°

That compression of the ovary, or other regions, stops a paroxysm is proved. ~~and~~ That it does so by acting as a counter-irritant at the periphery, while the brain centres are in this ~~of~~ state of excitement; and, reversely, by irritating these peripheral regions, we can transmit the irritation back to the centres, so as to give rise to a fresh paroxysm; and a "shock" from a galvanic battery

acts in the same way as the pressure. Ales, that this ovarian compression has a decided effect in mitigating the severity of the sequential phenomena.

6°

That the disease is curable by such means as have been described; as, by the internal administration of certain mineral tonics; and by regular application of electric, or magnetic, currents. That it is important to recognize the gravity of the case at the very beginning, so that we may be prompt in applying our remedies; and it is certain, that we can, at this time, get a rapid cure; whereas, the disease unchecked, or aggravated by a treatment which springs from ignorance, may go on until the unfortunate sufferer dies; or, worse still is sent to a lunatic asylum.

Lastly,

as showing that the theory of "Expectant attention" will not account for all the phenomena exhibited by these patients, we have some facts which to us appear conclusive, as being opposed to it. Although in some patients

there is certainly evidence of its being a factor to some extent; this we have had one patient, who was at one time a hospital nurse; she is what some would term "hysterical"; and in her we can produce a state approaching insensibility by pressing upon the spine; she believes the spinal cord is diseased, and she says she knows it is a very serious matter, and believes the cord can be "put into a fit" by pressing on the spine; we find in her that pressure exerted elsewhere has no effect whatever. But, apart from such examples as these, we find in most of the true cases, that there is no anticipation of results at all. For, (in pressing upon the ovary during a paroxysmal attack), the patient being unconscious, has no notion of the result; nor does she even possess any knowledge, afterwards, of anything having been done to her. We have, further, the fact that the colour-blindness comes on without the patient, or her friends, discovering it for some time, and that there is a regular order shown in the reproduction of the colour perception,

which it would be impossible for an uneducated person to feign; and the proof lies here: that she cannot at first perceive the colours, but as the Astromatopsia disappears she names the various hues correctly.

We certainly admit that the phenomena produced by physical agents appear sometimes to be produced by psychical agencies, but it is not so invariably; we also admit that the same results appear to be produced sometimes without any effort, either on the part of the patient or her attendants; a notable Example of such is given by the late Prof. Laycock, where a woman who had been "paralytic", and bedridden for years, suddenly jumped out of bed one morning. We must not however give in altogether to the notion that there is always some psychical agent at work. Even in these examples, there may be a physical agent at work; for although we are not yet very far advanced in the Science of Electricity we know that currents of electricity can be produced by inequalities in temperature

and it may be that such currents are at times produced in the body, and they would have the same effect, as they would if derived from a galvanic battery External to the patient.

It seems a pity, that when we come upon facts which we cannot Explain by what Knowledge we possess, we should give way to that egotistic feeling which prompts us to set down all these strange phenomena, as chimerical fancies of the patient.

Our progress must be slow and steady in the investigation of new facts, in the physiology, and pathology, of the very intricate machinery of the human body. We must often stop, in our advance, and retrace our steps, to see that we are sure of the ground gone over; and we are certain, by such steady advance to grasp more and more the secrets of Nature; by the earnest study of the phenomena which present themselves to us, to discover the mechanism by which they are produced; and through this again, to be guided, in our endeavours to alleviate human suffering.